

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-15. (Cancelled)

16. (New) A data transmission method in a digital telecommunication system including a mobile station, a radio access network element, a network adapter, a radio interface using channel coding and radio frames between the mobile station and the radio access network element, and a network interface between the radio access network element and the network adapter, the method comprising:

placing information units to be transmitted in radio frames of a lower protocol in the radio interface;

transmitting the radio frames over the radio interface; and

separating said information units from the radio frames received over the radio interface;

wherein the placing of information units comprises:

transmitting 38.4 kbit/s of user data in 14.4 kbit/s transmission frames via three 16 kbit/s channels at the network interface, every ninth transmission frame being a dummy frame;

providing 20-ms radio frames with phase indication which is modulo N, wherein  $N > 3$ ;

placing the information contents of  $N1$  transmission frames in each modulo N radio frame sequence, wherein  $N1 > 8$ ;

placing filler bits at the end of the last radio frame N of each radio frame sequence; and

wherein the method further comprises, at the reception end,:

identifying the phase of each modulo N radio frame sequence and the starting points of the transmission frames in the radio frames on the basis of said phase indication;

separating  $N1$  transmission frames from each radio frame sequence for further processing; and

rejecting said filler information.

17. (New) The method of claim 16, wherein the phase indication includes either a pseudo-noise code spread over N radio frames or a sequence number.

18. (New) The method of claim 16, further comprising coding the phase indication as protection against transmission errors.

19. (New) The method of claim 16, further comprising:  
adding one or more filler bits to the frame sequence if the bit number required by the N1 information units and phase indication is smaller than the total number of information bits in the modulo N frame sequence; and  
rejecting the one or more filler bits at the reception end.

20. (New) The method of claim 19, wherein the added one or more filler bits to the frame sequence is added at the end of the last frame.

21. (New) The method of claim 16, wherein a remote transcoder unit is arranged between the radio access network element and the network adapter at the network interface, and the method further comprises:

using transmission frames of a first type between said element and the remote transcoder;

using transmission frames of a second type between the remote transcoder and the network adapter; and

converting the transmission frames of the first type into transmission frames of the second type in the remote transcoder.